## REMARKS/ARGUMENTS

### I. General Remarks and Status of the Claims.

Claims 1-46 remain pending in this application. Claims 1, 5, 8, 9, 11, 13-15, and 18 are currently amended herein.

Claims 47-126 have been cancelled herein in response to a telephone restriction requirement imposed by the Examiner. In a telephone conversation with the Examiner on September 12, 2005, Applicants provisionally elected Group I, claims 1-46 for prosecution on the merits. Applicants hereby confirm the provisional election. Moreover, Applicants reserve the right to present claims 47-126 in one or more continuing applications.

### II. Request that the Examiner Verify that Certain References Have Been Considered.

In the Office Action, the examiner previously assigned to this case (Examiner Bryan A. Fuller) included several PTO 1449 forms submitted by Applicants, the majority of which bore Examiner Fuller's initials in the left hand column to designate his consideration of the references cited in the 1449 form. However, one form included with the Office Action did not bear Examiner Fuller's initials, and thus Applicants are unsure whether or not Examiner Fuller considered the references cited therein. The 1449 form in question bears a circular stamp in its upper left hand corner bearing the OIPE initials and the date July 06, 2004; the first cited reference on the form in question is U.S. Pat. No. 2,238,671 to Woodhouse. Applicants respectfully request that the Examiner verify in the next Office Communication in this case that the references cited by Applicants on the 1449 form in question have been considered by the Examiner.

### III. Remarks Regarding the Rejection of Claims 1-9, 15, and 19 Under 35 U.S.C. § 102.

Claims 1-9, 15, and 19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,613,558 issued to Dillenbeck, III (hereinafter "*Dillenbeck*"). With respect to claim 1, the Examiner has stated:

> Dillenbeck teaches... a method of cementing in a subterranean formation comprising: providing a cement composition comprising a hydraulic cement and a degradable material; placing the cement composition into a subterranean formation; allowing

> the cement composition to set therein; and allowing the degradable material to degrade.

(Office Action at 4.) Applicants respectfully disagree, and submit that *Dillenbeck* does not disclose or suggest every element recited in the subject claims as required to anticipate the claims under 35 U.S.C. § 102(b). MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2004) (hereinafter "MPEP").

Applicants' amended independent claim 1 recites the limitation of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Applicants respectfully submit that *Dillenbeck* does not disclose a cement composition containing degradable materials that degrade so as to create one or more voids within the cement sheath. In contrast, *Dillenbeck* is directed to a method of cementing wherein the cementing slurry contains "an additive which serves to gradually oxidize the cement hydration retarder... to accelerate the setting process of the cement." (*Dillenbeck*, column 4, lines 37-45). In other words, *Dillenbeck* discloses a cement slurry comprising a degrading agent (*e.g.*, the oxidizer) that degrades another component (*e.g.*, a retarder) in the slurry so as to affect the properties of the slurry (*e.g.*, the degradation of the retarder causes the slurry to set faster), whereas Applicants' independent claim 1 recites a cement composition comprising a degradable material that degrades so as to affect the properties of the set cement sheath (*e.g.*, the degradation of the degradable material creates voids within the cement sheath). The Examiner has not shown any portion of *Dillenbeck* to expressly or inherently disclose the creation of one or more voids within a cement sheath due to the degradation of a degradable material. Accordingly, Applicants respectfully submit that *Dillenbeck* does not disclose or suggest all of the limitations as recited by amended independent claim 1. Therefore, Applicants respectfully submit that amended independent claim 1, and the claims dependent therefrom, are not anticipated by *Dillenbeck*. Accordingly, Applicants respectfully request the timely issuance of a Notice of Allowance for claims 1-9, 15 and 19.

## IV. Remarks Regarding the Rejection of Claims 10-14, 16-18, and 20-46 Under 35 U.S.C. § 103

The Examiner has rejected certain dependent claims under 35 U.S.C. 103(a) as unpatentable over *Dillenbeck* in combination with other references.

**A. Claim 10.**

Claim 10 was rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent 5,203,834 to Hutchins, et al (hereinafter "*Hutchins*"). The Examiner has stated:

> Dillenbeck teaches the features as previously claimed except for wherein the degradable material, upon degradation, forms at least one gas, salt or combination thereof. Hutchins et al teaches in column 12, lines 53-60 a method wherein the degradable material, upon degradation, forms at least one gas, salt or combination thereof. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using a degradable material, which, upon degradation, forms at least one gas, salt or combination thereof in view of Hutchins et al. The motivation for this combination is that this allows for the cement composition to be more permeable to gases.

(Office Action, at 5.) Claim 10 depends from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor does the Examiner allege that *Hutchins* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Hutchins* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claim 10 contains all the limitations of independent claim 1, the failure of the *Dillenbeck-Hutchins* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claim 10.

**B. Claims 11, 14 and 46.**

Claims 11, 14, and 46 were rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent 6,387,986 to Moradi-Araghi, et al (hereinafter "*Moradi-Araghi*"). The Examiner has stated:

> Dillenbeck teaches the features as previously claimed except for wherein specific degradable materials are used. Moradi-Araghi et al teaches in column 12, lines 8-17 a method wherein polyanhydride, polyorthoester, or poly(lactic acid) can be used at the degradable materials. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using these specific degradable materials in view of Hutchins et al. The motivation for

> this combination is that these materials can degrade by various mechanisms.

(Office Action, at 6.) Claims 11, 14 and 46 depend from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor does the Examiner allege that *Moradi-Araghi* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Moradi-Araghi* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claims 11, 14 and 46 contain all the limitations of independent claim 1, the failure of the *Dillenbeck-Moradi-Araghi* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claims 11, 14 and 46.

**C. Claims 12-13, 16, and 20.**

Claims 12-13, 16 and 20 were rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent 6,599,863 to Palmer, et al (hereinafter "*Palmer*"). The Examiner has stated:

> Dillenbeck teaches the features as previously claimed except for wherein specific degradable materials are used in a specific amount. Palmer et al teaches in column 3, line 66 - column 5, line 10 a method wherein polyamide or nylon can be used as the degradable materials in an amount in the range of from about 5% to about 15% by weight of the composition. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using these specific degradable materials in specific amounts in view of Palmer et al. The motivation for this combination is that these materials do not have to be pure to be used. They can possess various additives.

(Office Action, at 6.) Claims 12-13, 16 and 20 depend from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor does the Examiner allege that *Palmer* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Palmer* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claims 12-13, 16 and 20 contain all the limitations of independent claim 1,

the failure of the *Dillenbeck-Palmer* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claims 12-13, 16 and 20.

**D. Claims 17-18 and 21-34.**

Claims 17-18 and 21-34 were rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent Publication 2001/0004936 to Chatterji, et al (hereinafter "*Chatterji*"). The Examiner has stated:

> With respect to claims 17 and 18: Dillenbeck teaches the features as previously claimed except for wherein the degradable material is present in the cement composition in an amount sufficient to leave voids in the cement composition that enhance the elasticity, resiliency, and/or ductility of the cement composition. Chatterji teaches in paragraph [0015] a method wherein the degradable material is present in the cement composition in an amount sufficient to leave voids in the cement composition that enhance the elasticity, resiliency, and/or ductility of the cement composition. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using a cement composition where the degradable material is present in an amount sufficient to leave voids in the cement composition that enhance the elasticity, resiliency, and/or ductility of the cement composition in view of Chatterji et al. The motivation for this combination is that it creates a cement composition, which hardens into a highly resilient solid mass having high compressive, tensile and bond strengths.
>
> With respect to claims 21 and 22: Dillenbeck teaches the features as previously claimed except for wherein a polymer emulsion is used in a specific amount. Chatterji teaches in paragraph [0015] and [0023] a method wherein a polymer emulsion is used in a specific amount. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using a polymer emulsion in a specific amount in view of Chatterji et al. The motivation for this combination is that it creates a cement composition, which hardens into a highly resilient solid mass having high compressive, tensile and bond strengths.
>
> With respect to claims 23-27: Dillenbeck teaches the features as previously claimed except for wherein the polymer emulsion comprises a specific polar monomer in a specific amount and a specific elasticity-enhancing monomer in specific amounts. Chatterji et al teaches in paragraphs [0018]-[0021] a method wherein the polymer emulsion comprises a specific polar monomer in a specific amount and a specific elasticity-enhancing monomer

in specific amounts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using a specific polar monomer and a specific elasticity-enhancing monomer, in specific amounts, to make the polymer emulsion in view of Chatterji et al. The motivation for this combination is that it creates a cement composition, which hardens into a highly resilient solid mass having high compressive, tensile and bond strengths.

With respect to claims 28-30: Dillenbeck teaches the features as previously claimed except for wherein a specific stiffness-enhancing monomer is added in a specific amount. Chatterji et al teaches in paragraphs [0019]-[0021] a method wherein a specific stiffness-enhancing monomer is added in a specific amount. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by adding to the polymer emulsion a specific stiffness-enhancing monomer in a specific amount in view of Chatterji et al. The motivation for this combination is that it creates a cement composition, which hardens into a highly resilient solid mass having high compressive, tensile and bond strengths.

With respect to claim 31: Dillenbeck teaches the features as previously claimed except for wherein the polymer emulsion comprises a styrene butadiene latex. Chatterji et al teaches in paragraphs [0019]-[0021] a method wherein the polymer emulsion comprises a styrene butadiene latex. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using a polymer emulsion that comprises a styrene butadiene latex in view of Chatterji et al. The motivation for this combination is that it creates a cement composition, which hardens into a highly resilient solid mass having high compressive, tensile and bond strengths.

With respect to claims 32-34: Dillenbeck teaches the features as previously claimed except for wherein the polymer emulsion further comprises a specific surfactant in a specific amount. Chatterji et al teaches in paragraphs [0015], [0025], and [0034] a method wherein the polymer emulsion comprises a specific surfactant in a specific amount. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by using a specific surfactant in the polymer emulsion in a specific amount in view of Chatterji et al. The motivation for this combination is that it creates a cement composition, which hardens into a highly resilient solid mass having high compressive, tensile and bond strengths.

(Office Action, at 7-10.) Claims 17-18 and 21-34 all depend, directly or indirectly, from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Applicants note the Examiner's statement that *Chatterji* "teaches in paragraph [0015] a method wherein the degradable material is present in the cement composition in an amount sufficient to leave voids in the cement composition that enhance the elasticity, resiliency, and/or ductility of the cement composition," *see* Office Action at 7; to the extent that this statement is an allegation by the Examiner that *Chatterji* supplies the missing element, Applicants respond that paragraph [0015] of *Chatterji* nowhere appears to mention voids in a cement composition at all. Nor does paragraph [0015] of *Chatterji* disclose a method comprising permitting a degradable material to degrade so as to create one or more voids in a cement sheath. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Chatterji* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claims 17-18 and 21-34 contain all the limitations of independent claim 1, the failure of the *Dillenbeck-Chatterji* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claims 17-18 and 21-34.

**E. Claims 35-41 and 43.**

Claims 35-41 and 43 were rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent Publication 2003/0221832 to Reddy, et al (hereinafter "*Reddy*"). The Examiner has stated:

> With respect to claims 35-37: Dillenbeck teaches the features as previously claimed except for wherein the cement composition further comprises nitrogen gas in a specific amount. Reddy et al teaches in paragraph [0010] a method wherein the cement composition further comprises nitrogen gas in a specific amount. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by having a cement composition that further comprises a specific amount of nitrogen gas in view of Reddy et al. The motivation for this combination is that it prevents trapped fluid pressure increases, reduces fluid hydrostatic pressure,

> removes drill cuttings, displaces drilling fluids in an eccentric annulus, controls fracture pressure and controls fluid loss.
>
> With respect to claims 38-41 and 43: Dillenbeck teaches the features as previously claimed except for wherein the cement composition further comprises a specific gas-generating additive in a specific amount capable of generating in situ. Reddy et al teaches in paragraphs [0012], [0022], and [0050] a method wherein the cement composition further comprises a specific gas-generating additive in a specific amount capable of generating in situ. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by having a cement composition that further comprises a specific gas-generating additive in a specific amount capable of generating in situ in view of Reddy et al. The motivation for this combination is that it prevents trapped fluid pressure increases, reduces fluid hydrostatic pressure, removes drill cuttings, displaces drilling fluids in an eccentric annulus, controls fracture pressure and controls fluid loss.

(Office Action, at 10-11.) Claims 38-41 and 43 all depend, directly or indirectly, from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor has the Examiner shown, or even alleged, that *Reddy* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Reddy* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claims 38-41 and 43 contain all the limitations of independent claim 1, the failure of the *Dillenbeck-Reddy* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claims 38-41 and 43.

### F. Claims 38-39 and 42.

Claims 38-39 and 42 were rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent 5,966,693 to Heathman (hereinafter "*Heathman*"). The Examiner has stated:

> With respect to claims 38-39 and 42: Dillenbeck teaches the features as previously claimed except for wherein the cement composition further comprises a specific gas-generating additive in a specific amount. Heathman teaches in column 3, lines 3-15 a method wherein the cement composition further comprises a

> specific gas-generating additive in a specific amount. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by having a cement composition that further comprises a specific gas-generating additive in a specific amount in view of Heathman. The motivation for this combination is that it allows the cement composition to be used in well bores that are deep, have a high bottom hole temperature, and penetrates weak formations having high potential for gas flow into the well bore.

(Office Action, at 11-12.) Claims 38-39 and 42 all depend, directly or indirectly, from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor has the Examiner shown, or even alleged, that *Heathman* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Heathman* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claims 38-39 and 42 contain all the limitations of independent claim 1, the failure of the *Dillenbeck-Heathman* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claims 38-39 and 42.

**G. Claim 44.**

Claim 44 was rejected as being unpatentable over *Dillenbeck* in view of U.S. Patent 6,904,971 to Brothers, et al (hereinafter "*Brothers*"). The Examiner has stated:

> With respect to claim 44: Dillenbeck teaches the features as previously claimed except for wherein the subterranean formation comprises a multilateral well. Brothers et al teaches in column 2, lines 19-29 a method wherein the subterranean formation comprises a multilateral well. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by having a subterranean formation that comprises a multilateral well in view of Brothers et al. The motivation for this combination is that it is common to use multilateral well wellbores because multilateral wellbores allows for a more proficient production of a subterranean formation.

(Office Action, at 12.) Claim 44 depends from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants'

amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor has the Examiner shown, or even alleged, that *Brothers* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Brothers* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claim 44 contains all the limitations of independent claim 1, the failure of the *Dillenbeck-Brothers* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claim 44.

**H. Claim 45.**

Claim 45 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dillenbeck* in view of U.S. Patent 6,578,630 to Simpson, et al (hereinafter "*Simpson*"). The Examiner has stated:

> With respect to claim 45: Dillenbeck teaches the features as previously claimed except for wherein the subterranean formation comprises a wellbore that comprises an expandable tubular. Simpson et al teaches in column 4, lines 40-64 a method wherein the subterranean formation comprises a wellbore that comprises an expandable tubular. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dillenbeck's invention by having a subterranean formation that further comprises a wellbore that comprises an expandable tubular in view of Simpson et al. The motivation for this combination is that it is common to use expandable tubulars because it allows for more options for production of oil and gas from the subterranean formations.

(Office Action, at 12-13.) Claim 45 depends from claim 1. As Applicants have explained above in Section III, the Examiner has not shown that *Dillenbeck* discloses all elements of Applicants' amended independent claim 1, particularly the element of allowing the degradable material to degrade "so as to create one or more voids within the cement sheath." Nor has the Examiner shown, or even alleged, that *Simpson* supplies the missing element. Accordingly, Applicants respectfully submit that the Examiner has not shown that the *Dillenbeck-Simpson* combination teaches or suggests all elements of Applicants' amended independent claim 1. Because dependent claim 45 contains all the limitations of independent claim 1, the failure of the

*Dillenbeck-Simpson* combination to teach or suggest all limitations of claim 1 prevents the combination from teaching or suggesting all limitations of claim 45.

## I. Conclusion.

Having demonstrated that none of the cited combinations teach or suggest all limitations of the subject claims, Applicants respectfully request the timely issuance of a Notice of Allowance for claims 10-14, 16-18, and 20-46.

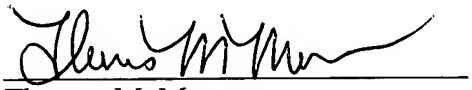
## SUMMARY AND PETITION FOR TWO-MONTH EXTENSION OF TIME TO FILE THIS RESPONSE

In light of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding objections and rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants' Response to this Office Action was due on December 29, 2005. Accordingly, Applicants have included herein a Petition for Two-Month Extension of Time to File this Response, along with check no. 956671 for the fee of $450.00 under 37 C.F.R. 1.136(a). The Commissioner is hereby authorized to charge Baker Botts L.L.P. Deposit Account No. 02-0383 (Order Number 063718.0334) for any underpayment, or to credit same with any overpayment of fees, in association with this filing.

Applicants believe that there are no additional fees due in association with this filing of this Response. However, the Commissioner is authorized to debit Baker Botts L.L.P. Deposit Account No. 02-0383, Order No. 063718.0334, for any underpayment of fees that may be due in association with this filing.

Respectfully submitted,



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